

RECEIVED



1600

RAW SEQUENCE LISTING

DATE: 05/01/2003

PATENT APPLICATION: US/09/724,427B

TIME: 13:18:49

Input Set : A:\seapl. seq listing for 7682-053-999.txt

Output Set: N:\CRF4\05012003\I724427B.raw

3 <110> APPLICANT: Palese, Peter
 4 Garcia-Sastre, Adolfo
 6 <120> TITLE OF INVENTION: RECOMBINANT NEGATIVE STRAND RNA VIRUS EXPRESSION SYSTEMS AND
 7 VACCINES
 9 <130> FILE REFERENCE: 7682-053-999
 11 <140> CURRENT APPLICATION NUMBER: 09/724,427B
 C--> 12 <141> CURRENT FILING DATE: 2001-11-28
 14 <150> PRIOR APPLICATION NUMBER: 09/396,539
 15 <151> PRIOR FILING DATE: 1999-09-14
 17 <160> NUMBER OF SEQ ID NOS: 63
 19 <170> SOFTWARE: PatentIn version 3.0
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 21
 23 <212> TYPE: DNA
 24 <213> ORGANISM: Influenza virus
 26 <400> SEQUENCE: 1
 27 tacgaggaaa tgttctgtt a
 29 <210> SEQ ID NO: 2
 30 <211> LENGTH: 19
 31 <212> TYPE: PRT
 32 <213> ORGANISM: Influenza virus
 34 <400> SEQUENCE: 2
 35 Gln Leu Val Trp Met Ala Cys Asn Ser Ala Ala Phe Glu Asp Leu Arg
 36 1 5 10 15
 37 Val Leu Ser
 39 <210> SEQ ID NO: 3
 40 <211> LENGTH: 16
 41 <212> TYPE: PRT
 42 <213> ORGANISM: Influenza virus
 44 <400> SEQUENCE: 3
 45 Thr Tyr Gln Arg Thr Arg Gln Leu Val Arg Leu Thr Gly Met Asp Pro
 46 1 5 10 15
 48 <210> SEQ ID NO: 4
 49 <211> LENGTH: 95
 50 <212> TYPE: DNA
 51 <213> ORGANISM: Influenza virus
 53 <400> SEQUENCE: 4
 54 gaagcttaat acgactcact ataagtagaa acaagggtgt ttttcatat catttaaact 60
 55 tcacctgct tttgctgaat tcattcttct gcagg 95
 57 <210> SEQ ID NO: 5
 58 <211> LENGTH: 95
 59 <212> TYPE: DNA
 60 <213> ORGANISM: Influenza virus

ENTERED

21

RAW SEQUENCE LISTING

DATE: 05/01/2003

PATENT APPLICATION: US/09/724,427B

TIME: 13:18:49

Input Set : A:\seapl. seq listing for 7682-053-999.txt

Output Set: N:\CRF4\05012003\I724427B.raw

```

62 <400> SEQUENCE: 5
64 gaagcttaat acgactcact ataagcaaaa gcagggtgaa gtttaaatga tatgaaaaaa 60
65 cacccttggt tctactgaat tcattcttct gcagg 95
67 <210> SEQ ID NO: 6
68 <211> LENGTH: 68
69 <212> TYPE: DNA
70 <213> ORGANISM: Influenza virus
72 <400> SEQUENCE: 6
73 agcttaatac gactcactat aagatctatt aaacttcacc ctgcttttgc tgaattcatt 60
74 cttctgca 68
76 <210> SEQ ID NO: 7
77 <211> LENGTH: 60
78 <212> TYPE: DNA
79 <213> ORGANISM: Influenza virus
81 <400> SEQUENCE: 7
82 gaagaatgaa ttcagcaaaa gcagggtgaa gtttaataga tcttatagtg agtcgtatta 60
84 <210> SEQ ID NO: 8
85 <211> LENGTH: 42
86 <212> TYPE: DNA
87 <213> ORGANISM: Influenza virus
89 <400> SEQUENCE: 8
90 ccgaattctt aatacgactc actataagta gaaacaaggg tg 42
92 <210> SEQ ID NO: 9
93 <211> LENGTH: 30
94 <212> TYPE: DNA
95 <213> ORGANISM: Influenza virus
97 <400> SEQUENCE: 9
98 cctctagacg ctcgagagca aaagcagggtg 30
100 <210> SEQ ID NO: 10
101 <211> LENGTH: 15
102 <212> TYPE: RNA
103 <213> ORGANISM: Influenza virus
105 <400> SEQUENCE: 10
106 caccugcuu uugcu 15
108 <210> SEQ ID NO: 11
109 <211> LENGTH: 15
110 <212> TYPE: RNA
111 <213> ORGANISM: Influenza virus
113 <400> SEQUENCE: 11
114 caccugcuu uuacu 15
116 <210> SEQ ID NO: 12
117 <211> LENGTH: 15
118 <212> TYPE: RNA
119 <213> ORGANISM: Influenza virus
121 <400> SEQUENCE: 12
122 caccugcuu cugcu 15
124 <210> SEQ ID NO: 13
125 <211> LENGTH: 15
127 <212> TYPE: RNA

```

RAW SEQUENCE LISTING

DATE: 05/01/2003

PATENT APPLICATION: US/09/724,427B

TIME: 13:18:49

Input Set : A:\seapl. seq listing for 7682-053-999.txt

Output Set: N:\CRF4\05012003\I724427B.raw

```

128 <213> ORGANISM: Influenza virus
130 <400> SEQUENCE: 13
131 caccucguuu uugcu 15
133 <210> SEQ ID NO: 14
134 <211> LENGTH: 16
135 <212> TYPE: RNA
136 <213> ORGANISM: Influenza virus
138 <400> SEQUENCE: 14
139 caccuugcu uuugcu 16
141 <210> SEQ ID NO: 15
142 <211> LENGTH: 15
143 <212> TYPE: RNA
144 <213> ORGANISM: Influenza virus
146 <400> SEQUENCE: 15
147 caccucguuu uuacu 15
149 <210> SEQ ID NO: 16
150 <211> LENGTH: 15
151 <212> TYPE: RNA
152 <213> ORGANISM: Influenza virus
154 <400> SEQUENCE: 16
155 caccucguuu cugcu 15
157 <210> SEQ ID NO: 17
158 <211> LENGTH: 16
159 <212> TYPE: RNA
160 <213> ORGANISM: Influenza virus
162 <400> SEQUENCE: 17
163 caccuugcu uuacu 16
165 <210> SEQ ID NO: 18
166 <211> LENGTH: 16
167 <212> TYPE: RNA
168 <213> ORGANISM: Influenza virus
170 <400> SEQUENCE: 18
171 caccuuguu uuacu 16
173 <210> SEQ ID NO: 19
174 <211> LENGTH: 16
175 <212> TYPE: RNA
176 <213> ORGANISM: Influenza virus
178 <400> SEQUENCE: 19
179 caccuuguu ucuacu 16
181 <210> SEQ ID NO: 20
182 <211> LENGTH: 96
183 <212> TYPE: DNA
184 <213> ORGANISM: Influenza virus
186 <400> SEQUENCE: 20
187 ctagacgcc tgcagcaaaa gcagggtgac aaagacataa tggagaaaaa aatcactggg 60
188 tataccaccg ttgatatac ccaatcgcat cgtaaa 96
190 <210> SEQ ID NO: 21
191 <211> LENGTH: 96
192 <212> TYPE: DNA

```

RAW SEQUENCE LISTING

DATE: 05/01/2003

PATENT APPLICATION: US/09/724,427B

TIME: 13:18:49

Input Set : A:\seapl. seq listing for 7682-053-999.txt

Output Set: N:\CRF4\05012003\I724427B.raw

```

193 <213> ORGANISM: Influenza virus
195 <400> SEQUENCE: 21
196 gttcttttacg atgcgattgg gatatatcaa cggtggtata cccagtgatt tttttctcca      60
197 ttatgtcttt gtcaccctgc ttttgctgca gggcgt                                96
199 <210> SEQ ID NO: 22
200 <211> LENGTH: 34
201 <212> TYPE: DNA
202 <213> ORGANISM: Influenza virus
204 <400> SEQUENCE: 22
205 actgcgatga gtggcagggc ggggcgtaat agat                                34
207 <210> SEQ ID NO: 23
208 <211> LENGTH: 38
209 <212> TYPE: DNA
210 <213> ORGANISM: Influenza virus
212 <400> SEQUENCE: 23
213 ctagatctat tacgccccgc cctgccactc atcgcagt                                38
215 <210> SEQ ID NO: 24
216 <211> LENGTH: 34
217 <212> TYPE: DNA
218 <213> ORGANISM: Influenza virus
220 <400> SEQUENCE: 24
221 actgcgatga gtggcagggc ggggcgtaat agat                                34
223 <210> SEQ ID NO: 25
224 <211> LENGTH: 38
225 <212> TYPE: DNA
226 <213> ORGANISM: Influenza virus
228 <400> SEQUENCE: 25
229 ctagatctat tacgccccgc cctgccactc atcgcagt                                38
231 <210> SEQ ID NO: 26
232 <211> LENGTH: 97
233 <212> TYPE: DNA
234 <213> ORGANISM: Influenza virus
236 <400> SEQUENCE: 26
237 ctagacgcc tgacgaaaa gcagggtgac aaagacataa tggagaaaaa aaatcactgg      60
238 gtataccacc gttgatatat cccaatcgca tcgtaaa                                97
240 <210> SEQ ID NO: 27
241 <211> LENGTH: 96
242 <212> TYPE: DNA
243 <213> ORGANISM: Influenza virus
245 <400> SEQUENCE: 27
246 gttcttttacg atgcgattgg gatatatcaa cggtggtata cccagtgatt tttttctcca      60
247 ttatgtcttt gtcaccctgc ttttgctgca gggcgt                                96
249 <210> SEQ ID NO: 28
250 <211> LENGTH: 30
251 <212> TYPE: DNA
253 <213> ORGANISM: Influenza virus
255 <400> SEQUENCE: 28
256 cgggaattctc ttcgagcgaa agcaggagtt                                30
258 <210> SEQ ID NO: 29

```

RAW SEQUENCE LISTING

DATE: 05/01/2003

PATENT APPLICATION: US/09/724,427B

TIME: 13:18:49

Input Set : A:\seppl. seq listing for 7682-053-999.txt

Output Set: N:\CRF4\05012003\I724427B.raw

```

259 <211> LENGTH: 51
260 <212> TYPE: DNA
261 <213> ORGANISM: Influenza virus
263 <400> SEQUENCE: 29
264 catgggtgag ttctgaccaa aatctagatt ataaaatagg atacatatgc a 51
266 <210> SEQ ID NO: 30
267 <211> LENGTH: 51
268 <212> TYPE: DNA
269 <213> ORGANISM: Influenza virus
271 <400> SEQUENCE: 30
272 catgggtgag ttctgaccaa aatctagatt ataaaatagg atacatatgc a 51
274 <210> SEQ ID NO: 31
275 <211> LENGTH: 43
276 <212> TYPE: DNA
277 <213> ORGANISM: Influenza virus
279 <400> SEQUENCE: 31
280 aatgtatcct attttataat ctagattttg gtcgaaactc acc 43
282 <210> SEQ ID NO: 32
283 <211> LENGTH: 24
284 <212> TYPE: DNA
285 <213> ORGANISM: Influenza virus
287 <400> SEQUENCE: 32
288 ggccactagt aggtcgacgc cggc 24
290 <210> SEQ ID NO: 33
291 <211> LENGTH: 22
292 <212> TYPE: DNA
293 <213> ORGANISM: Influenza virus
295 <400> SEQUENCE: 33
296 gcgctggcca tcttgccagc ca 22
298 <210> SEQ ID NO: 34
299 <211> LENGTH: 17
300 <212> TYPE: DNA
301 <213> ORGANISM: Influenza virus
303 <400> SEQUENCE: 34
304 agaaaaaat cactggg 17
306 <210> SEQ ID NO: 35
307 <211> LENGTH: 17
308 <212> TYPE: DNA
309 <213> ORGANISM: Influenza virus
311 <400> SEQUENCE: 35
312 ttacgccccg ccctgcc 17
314 <210> SEQ ID NO: 36
316 <211> LENGTH: 23
317 <212> TYPE: DNA
318 <213> ORGANISM: Influenza virus
320 <400> SEQUENCE: 36
321 gcgcatcgat aggtcgacgc cgg 23
323 <210> SEQ ID NO: 37
324 <211> LENGTH: 55

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/01/2003
PATENT APPLICATION: US/09/724,427B TIME: 13:18:50

Input Set : A:\seppl. seq listing for 7682-053-999.txt
Output Set: N:\CRF4\05012003\I724427B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:47; N Pos. 9